1. Record Nr. UNINA9910458564703321

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Titolo	Marine rudders and control surfaces [[electronic resource]] : principles, data, design and applications / / Anthony F. Molland and Stephen R. Turnock
Pubbl/distr/stampa	Amsterdam ; ; London, : Elsevier/Butterworth-Heinemann, 2007
ISBN	1-281-11238-0 9786611112387 0-08-054924-1
Descrizione fisica	1 online resource (451 p.)
Altri autori (Persone)	TurnockStephen R
Disciplina	623.862
Soggetti	Steering-gear Ships - Hydrodynamics Electronic books.
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Description based upon print version of record.
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Front Cover; Marine Rudders and Control Surfaces: Principles, Data, Design and Applications; Copyright Page; Contents; Preface; Nomenclature; Abbreviations; Figure acknowledgements; Part One: Principles; Chapter 1. Introduction; Chapter 2. Control surface types; 2.1 Control surfaces and applications; 2.2 Rudder types; 2.3 Other control surfaces; Chapter 3. Physics of control surface operation; 3.1 Background; 3.2 Basic flow patterns and terminology; 3.3 Properties of lifting foils; 3.4 Induced drag; 3.5 Rudder-propeller interaction; 3.6 Propeller-induced velocity upstream of rudder 3.7 Influence of hull on rudder-propeller performanceChapter 4. Control surface requirements; 4.1 Rudder requirements; 4.2 Rudder design within the ship design process; 4.3 Requirements of other control surfaces; 4.4 Rudder and control surface design strategy; Part Two: Design Data Sources; Chapter 5. Experimental data; 5.1 Review of experimental data and performance prediction; 5.2 Presentation of experimental data; 5.3 Experimental data for rudder in free stream; 5.4 Experimental data for rudder behind propeller; 5.5 Effective aspect ratio; 5.6 Rudder and control surface area

5.7 Free surface effects5.8 Cavitation on control surfaces; 5.9 Propulsive effects; 5.10 Hull pressures; Chapter 6. Theoretical and numerical methods; 6.1 Available methods; 6.2 Potential flow methods; 6.3 Navier-Stokes methods; 6.4 Interpretation of numerical analysis; 6.5 Free-stream rudders; 6.6 Rudder-propeller interaction; 6.7 Unsteady behaviour; 6.8 Future developments; Part Three: Design Strategy and Methodology; Chapter 7. Detailed rudder design; 7.1 Background and philosophy of design approach; 7.2 Rudder design process; 7.3 Applications of numerical methods
7.4 Guidelines for designChapter 8. Manoeuvring; 8.1 Rudder forces; 8.2 Hull upstream; 8.3 Influence of drift angle; 8.4 Low and zero speed and four quadrants; 8.5 Shallow water/bank effects; Chapter 9. Other control surfaces; 9.1 Fin stabilisers; 9.2 Hydroplanes; 9.3 Pitch damping fins; Chapter 10. Propulsion; 10.1 Propeller-rudder interaction; 10.2 Propeller effects; 10.3 Rudder effects; 10.4 Overall effects; Part Four: Design Applications; Chapter 11. Applications; 11.1 Background; 11.2 Large ships; 11.3 Small craft; 11.4 Low speed and manoeuvring; 11.5 Control; Appendix 1
Tabulated test dataAppendix 2; Rudder and propeller design software; Index; Color Plate Section

Sommario/riassunto

This book guides naval architects from the first principles of the physics of control surface operation, to the use of experimental and empirical data and applied computational fluid dynamic modelling of rudders and control surfaces.The empirical and theoretical methods applied to control surface design are described in depth and their use explained through application to particular cases. The design procedures are complemented with a number of worked practical examples of rudder and control surface design.The online companion site contains an extensive modelling data library,